

Appln. No. 09/893,005
Amd. dated December 23, 2003
Reply to Office Action of July 1, 2003

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-10 (Cancelled).

11 (Currently amended). A grown-up transgenic plant which is ~~obtainable~~obtained by (i) introducing a DNA sequence, which encodes ~~encoding~~ a physiologically active protein~~cytokine~~ of a human or mammalian source and has an additional constitutive regulatory sequence, inducible regulatory sequence, or tissue specific regulatory sequence, into a plant protoplast, plant cell, plant tissue, calli, or a plant ~~body~~; (ii) growing or regenerating the transformed plant protoplast, plant cell, ~~or plant tissue, calli, or plant~~ into a grown-up transgenic plant ~~body~~ while allowing expression of said DNA ~~sequence~~ within the grown-up transgenic plant ~~body~~ to form said cytokine in an amount of 0.1 ng to one milligram per one kilogram by fresh weight of the grown-up transgenic plant that is effective when taken orally to prevent and/or treat humans or mammals ~~suffering~~ from diseases which can be prevented and/or treated with susceptible to said physiologically active protein cytokine when the grown-up

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transgenic plant, which is edible to humans and mammals, is
ingested by said humans or said mammals; and (iii) harvesting the
grown-up transgenic plant body, said physiologically active
protein being present endogenously in humans or mammals and being
a substance responsible for the maintenance or the modulation of
physiological functions in said humans or mammals.

12 (Currently amended). The grown-up transgenic plant
of claim 11, wherein said physiologically active protein cytokine
is one or more human or mammalian cytokines.

13 (Currently amended). The grown-up transgenic plant
of claim 12, wherein the one or more human or mammalian cytokines
are selected from the group consisting of interferons,
interleukins, hematopoietic factors, and growth factors, ~~wherein~~
~~said growth factors include nerve growth factor, epidermal growth~~
~~factor, platelet derived growth factor, transforming growth~~
~~factor α , growth factor β , growth hormone, insulin and steroids.~~

14 (Currently amended). The grown-up transgenic plant
of claim 11, wherein the mammalian source is bovine, porcine,
mouse, or rat with the proviso that the transgenic plant is
ingested by a mammal belonging to the same family as the
mammalian source used.

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15(Currently amended). The grown-up transgenic plant of claim 11, which ~~is edible~~ can be ingested by humans without cooking or heating.

16(Currently amended). The grown-up transgenic plant of claim 11, wherein said plant ~~body~~ is a plant of a family selected from the group consisting of *Solanaceae*, *Apiaceae*, *Asteraceae*, *Brassicaceae*, *Cucurbitaceae*, *Rosaceae*, *Vitaceae*, *Ericaceae*, *Caricaceae*, *Fabaceae*, *Juglandaceae*, and *Chenopodiaceae*.

Claim 17 (Cancelled).

18(Currently amended). An isolated tissue of the grown-up transgenic plant of claim 11, which is selected from the group consisting of leaf, stem, root, fruit, peel, bud, petal, and a combination thereof, wherein said isolated tissue comprises the cytokine expressed in said transgenic plant.

19(Previously presented). The isolated tissue of claim 18, to which trehalose has been added.

20(Currently amended). A ~~processed form of~~ composition comprising the grown-up transgenic plant of claim 11 and an edible material, which results from the grown-up transgenic plant

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~~of claim 11 being subjected to a process comprising one or more~~
~~steps of cutting~~is in a cut, peeling~~peeled,~~
~~pulverizing~~pulverized, squeezing~~squeezed, or extracting~~extracted
form.

21 (Currently amended). The ~~processed form~~food
composition of claim 20, ~~to which~~ is further supplemented with
~~trehalose has been added.~~

Claims 22-30 (Cancelled).

Claim 31 (Not entered).

32 (New). The grown-up transgenic plant of claim 11, which
can be ingested by mammals without cooking or heating.